

IN THE CLAIMS:

23. (Amended) A polyurethane solution containing alkoxy silane structural units, wherein the polyurethane is the reaction product, in organic solution, of

- a) at least one at least difunctional polyol having a molecular weight of 500 to 16,000,
- b) at least one at least difunctional polyisocyanate having a molecular weight of 140 to 1,500,
- c) at least one low molecular weight at least difunctional alcohol and/or amine having a molecular weight of 32 to 500,
- d) at least one compound containing at least one alkoxy silane group and an isocyanate-reactive group and
- e) optionally a monofunctional compound containing an amino, alcohol or oxime group, other than a compound falling within the scope of component d),

wherein the equivalents of component d) are at least 50% of the total equivalents of components d) and e) and wherein the number of terminal alkoxy silane groups must be at least 50 wt.% of all the incorporated alkoxy silane groups.

24. (Amended) The polyurethane solution of Claim 23 wherein the polyurethane is reaction product, in organic solution, of

- a) 40 to 92 wt.% of at least one at least difunctional polyol having a molecular weight of 500 to 16,000,
- b) 7 to 50 wt.% of at least one at least difunctional polyisocyanate having a molecular weight of 140 to 1,500,
- c) 0.5 to 20 wt.% of at least one low molecular weight at least difunctional alcohol and/or amine having a molecular weight of 32 to 500,
- d) 0.1 to 5 wt.% of at least one compound containing at least one alkoxy silane group and an isocyanate-reactive group and
- e) optionally a monofunctional compound containing an amino, alcohol or oxime group, other than a compound falling within the scope of component d),

wherein the percentages are based on weight of the polyurethane and the equivalents of component d) are at least 75% of the total equivalents of components d) and e).

25. (Amended) The polyurethane solution of Claim 23 wherein the polyurethane is the reaction product, in organic solution, of

- a) 47 to 88 wt.% of at least one at least difunctional polyol having a molecular weight of 500 to 16,000,
- b) 10 to 40 wt.% of at least one at least difunctional polyisocyanate having a molecular weight of 140 to 1,500,
- c) 0.8 to 17 wt.% of at least one low molecular weight at least difunctional alcohol and/or amine having a molecular weight of 32 to 500,
- d) 0.2 to 3.0 wt.% of a compound containing an alkoxy silane group and an isocyanate-reactive group and
- e) 0-0.5 wt.% of a monofunctional compound containing an amino, alcohol or oxime group, other than a compound falling within the scope of component d),

wherein the percentages are based on weight of the polyurethane and the equivalents of component d) are at least 95% of the total equivalents of components d) and e).

39. (Amended) A process for preparing the polyurethane solution of Claim 23 which comprises

- a) preparing an isocyanate-functional polyurethane in a one- or two-stage reaction from at least one polyol a), at least one difunctional polyisocyanate b), and at least one low molecular weight component c),
- b) subsequently reacting the product of step a) with at least one compound d) containing an alkoxy silane group and an isocyanate-reactive group and optionally a monofunctional component e) to obtain a polyurethane with alkoxy silane structural units which no longer contains free isocyanate groups, and
- c) adding an organic solvent either before, during or after step a) in an amount such that the resulting polyurethane solution with alkoxy silane end groups has a solids content of 9 to 65 wt.%.

40. (Amended) The process of Claim 39 which comprises

- a) reacting components a), b) and optionally c) in a one-stage reaction, optionally in the presence of suitable solvents, to obtain an isocyanate-functional polyurethane,
- b) achieving the desired viscosity and molecular weight by optionally adding a) an additional amount of polyisocyanate b) and/or low molecular weight difunctional component c), and
- c) chain-stopping the reaction by adding a monoamino-functional compound d) containing an alkoxy silane group.